- The reduction of pollutant export in highway runoff mainly results from infiltration losses as runoff moves over the pervious surfaces and efforts to maximize infiltration capacity of these surfaces should be encouraged.

The following conclusions/recommendations are related to the development of total nitrogen export functions:

- TN exports from "the Piedmont and Mountains area" and "Coastal plain" can be statistically correlated to the imperviousness of contributing drainage area.

- When applying Schueler's Simple Method using recommended parameters for the new development scenario of N.C. urban watersheds, the estimated TN exports in highway runoff may be overestimated by as much as 1.48 times.

- Application of the Simple Method should rely on actual monitoring data for model validation and parameter estimation.

- With appropriate validation of the Simple Method using highway runoff data, individual export functions for TN for "the Piedmont and Mountains" and "the Coastal plain" have been developed. It is hoped that these TN export functions would serve as a practical tool for NC DOT to design new BMPs or retrofit existing ones.

- Application of the export functions should be based on similar highway site characteristics from which these functions were derived. Further research is suggested to incorporate traffic conditions into the export functions, and to apply GIS for watershed-level pollutant loading calculations.